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Amendments to the Specification:

On page 1, after the title and before line 1, please insert the heading:

Background

On page 1, please amend the paragraph spanning lines 7-17 as follows:

A method of this kind and a corresponding computed tomography apparatus are known from US 6,285,733 (PHD 98.123). The measuring values which are acquired therein by a two-dimensional detector unit are dependent on the intensity in the radiation beam to the other side of the examination zone and are first subjected to a rebinning operation. This operation yields groups of measuring values which are associated with fan beams which are situated in equidistant fan beam planes which extend parallel to one another and to the axis of rotation. After the rebinning operation, the fan beams are composed of rays which traverse a plane, containing the axis of rotation and extending perpendicularly to the fan beam planes of the relevant group, in puncture points which are situated on equidistant connecting lines which extend perpendicularly to the axis of rotation and parallel to one another.

On page 2, before the paragraph beginning on line 8, please insert the heading:

Summary

On page 2, please amend the paragraph spanning lines 8-30 as follows:

Therefore, it is an object of ~~the present invention~~ to conceive a method of the kind set forth in such a manner that the time required for the reconstruction of a CT image is reduced. This object is achieved ~~in accordance with the invention~~ by means of a computed tomography method which includes the steps of:

- a) generating, while using a radiation source, a conical radiation beam which traverses an examination zone or an object present therein,

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- b) generating a circular relative motion, including a rotation about an axis of rotation, between the radiation source on the one side and the examination zone or the object on the other side,
- c) acquiring, while using a detector unit, measuring values which are dependent on the intensity in the radiation beam to the other side of the examination zone during the relative motion,
- d) rebinning the measuring values so as to form a number of groups, each group containing the measuring values of fan beams which are situated in equidistant fan beam planes which extend parallel to one another and to the axis of rotation and are composed of rays which traverse a plane which contains the axis of rotation and extends perpendicularly to the fan beam planes of this group in puncture points which are situated on equidistant connecting lines which extend perpendicularly to the axis of rotation and parallel to one another,
- e) reconstructing the spatial distribution of the attenuation of the X-rays from the measuring data, formed by the rebinning of the measuring values, for rays which extend perpendicularly to the planes of the groups and through the puncture points so as to form at least one CT image.

On page 2 please amend the paragraph starting on line 31 and continuing to page 3, line 4 as follows:

Whereas the reconstruction according to the known method takes place while taking into account the cone beam geometry prevailing during the acquisition of the measuring values, the present reconstruction ~~in accordance with the invention~~ is based on a parallel beam geometry in which all beams extend perpendicularly to the plane of the associated group and hence parallel to the central plane defined by the circular trajectory. The amount of calculation work required for such a parallel beam geometry is substantially smaller than that required for a cone beam geometry. A further advantage resides in the fact that in accordance with the invention a cylindrical part of the examination zone is reconstructed.

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On page 3, please amend the paragraph spanning lines 18-21 as follows:

Claim 4 describes a preferred ~~application of the method in accordance with the invention~~; CT fluoroscopy ~~requires~~ application for fast reconstruction of the CT images, notably if the distances in time between two updates of a CT image are shorter than the period of time ~~required~~ for complete acquisition of the measuring values for a CT image

On page 3, please amend the paragraph spanning lines 22-24 as follows:

Claim 5 describes a computed tomography apparatus for carrying out the ~~method in accordance with the invention~~ and claim 6 describes a computer program for controlling a computed tomography apparatus of this kind.

On page 3, please delete the paragraph spanning lines 27-28 and replace it with the following heading and paragraph:

~~The invention will be described in detail hereinafter with reference to the drawings. Therein:~~

Brief Description of the Drawings

The invention may take form in various components and arrangements of components, and in various steps and arrangements of steps. The drawings are only for purposes of illustrating the preferred embodiments and are not to be construed as limiting the invention.

On page 4, before the paragraph beginning on line 4, please insert the heading:

Detailed Description

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On page 8, please amend the paragraph spanning lines 11-21 as follows:

The invention as described so far with reference to Fig. 2 is known from US 6,285,733 (~~PHD 98-123~~). In accordance with the invention, however, the further processing of the measuring data is not carried out on the basis of a cone beam geometry but on the basis of a parallel beam geometry. This difference in processing is symbolically represented by the dashed box 106 and illustrated in Fig. 6. The solid lines in Fig. 6 represent the diverging rays of a fan beam (for example, 413) emanating from a radiation source position (for example, S_0). These rays traverse the virtual detector 160 in equidistant puncture points. The invention, however, instead utilizes the rays which are represented by dashed lines and are incident perpendicularly on the virtual detector 160. The measuring data produced by the rebinning operation are associated with the parallel rays traversing each time the same puncture point of the virtual detector 160 as the diverging rays emanating from the radiation source position S_0 .

On page 8 please amend the paragraph starting on line 29 and continuing to page 9, line 4 as follows:

The invention thus enables the reconstruction of a cylindrical part of the examination zone whose height corresponds to the distance between the two edges 161 and 162 of the virtual window 160. The height h of the cylindrical part of the examination zone is in conformity with the relation:

$$h = r \tan(\gamma_{\max}) \cos(\alpha) \quad (1)$$

Therein, r is the radius of the circular trajectory 17, γ_{\max} is the maximum cone angle and α is the fan angle, that is, the angle of aperture of the radiation beam in a plane perpendicular to the axis of rotation.

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On page 9, after the last paragraph ending on line 29, please insert the following paragraph:

The invention has been described with reference to the preferred embodiments. Modifications and alterations may occur to others upon reading and understanding the preceding detailed description. It is intended that the invention be constructed as including all such modifications and alterations insofar as they come within the scope of the appended claims or the equivalents thereof.